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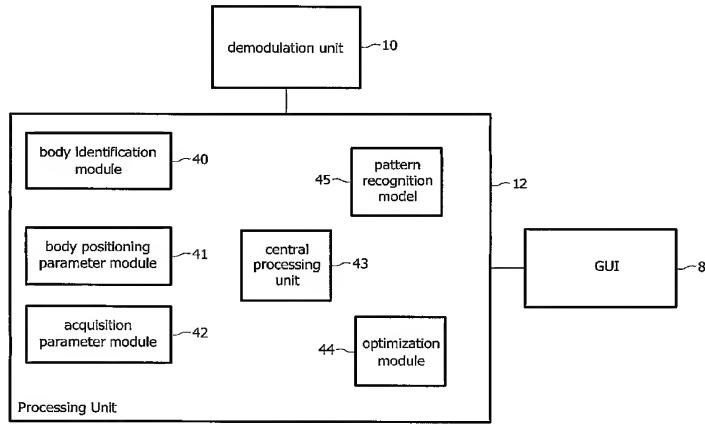
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(54) Title: ALL IN ONE PLAN SCAN IMAGING FOR OPTIMIZATION OF ACQUISITION PARAMETERS



(57) **Abstract:** The present invention provides a magnetic resonance imaging system making use of low resolution, whole-body plan scan image of a body. The whole-body plan scan image is exploited to gather a plurality of individual information of a body that is essential for an optimization of acquisition parameter for acquisition of a high resolution and high quality image of a region of interest of the body. Moreover, the whole-body plan scan image is used in order to facilitate a determination and a selection of a region of interest to be performed by an operator. Additionally, the MRI provides effective means for autonomously identifying specific body parts or even organs of a patient. Providing the entire information that can be extracted from the whole-body plan scan image to the operator effectively simplifies the workflow of the operator in an intuitive way. Preferably, during acquisition of the low resolution whole-body plan scan image, necessary calibration parameters for acquisition of the final high resolution image are obtained.

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